

(19) World Intellectual Property Organization
 International Bureau



(43) International Publication Date
 23 October 2003 (23.10.2003)

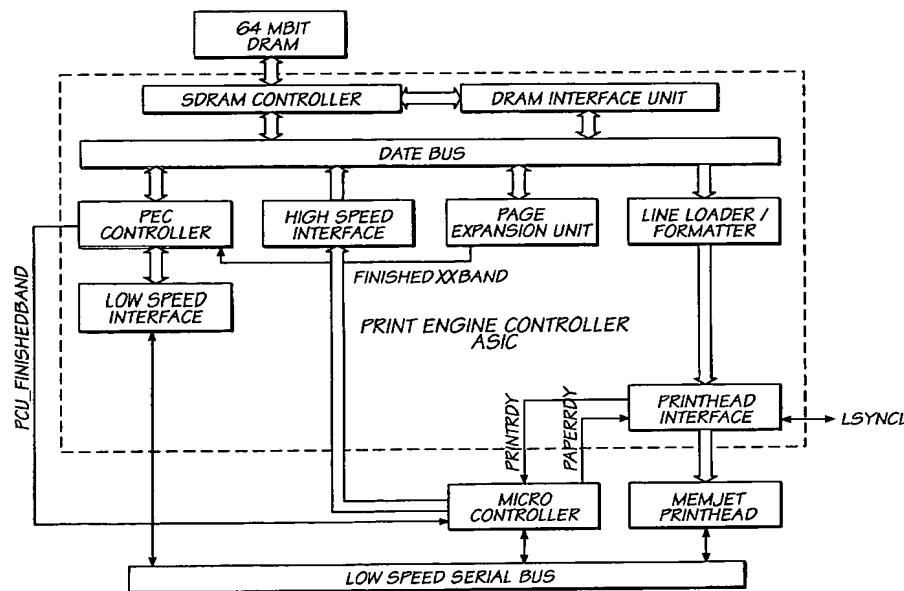
PCT

(10) International Publication Number
WO 03/086762 A1

- (51) International Patent Classification⁷: **B41J 2/01**
- (74) Agent: **SILVERBROOK, Kia**; Silverbrook Research Pty Ltd, 393 Darling Street, Balmain, New South Wales 2041 (AU).
- (21) International Application Number: **PCT/AU02/00774**
- (22) International Filing Date: **14 June 2002 (14.06.2002)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
 10/120,350 12 April 2002 (12.04.2002) **US**
- (71) Applicant (for all designated States except US): **SILVERBROOK RESEARCH PTY. LTD.** [AU/AU]; 393 Darling Street, Balmain, New South Wales 2041 (AU).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **SILVERBROOK, Kia** [AU/AU]; Silverbrook Research Pty Ltd, 393 Darling Street, Balmain, New South Wales 2041 (AU).
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.**
- (84) Designated States (regional): **ARIPO** patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), **Eurasian** patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), **European** patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), **OAPI** patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
 — with international search report

[Continued on next page]

(54) Title: **PROCESSING OF IMAGES FOR HIGH VOLUME PAGEWIDTH PRINTING**



(57) Abstract: An image processing apparatus for a printer (10) includes a print engine controller (48) that is configured to receive image data in an image storage format. The print engine controller includes data processing circuitry that is configured to process the image data at a rate of at least one billion pixels per second to transform the data into print data. The print engine controller includes data communication circuitry (176) that is operatively connected to the data processing circuitry and is configured to communicate the print data to a printhead (41).



WO 03/086762 A1

WO 03/086762 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU02/00774

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : B41J 2/01		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Electronic search as below		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
DWPI (B41J 002, G06F 003/12, G06F 007, G06F 013, G06F 017, G06F 019, print, inkjet, bubblejet, image, picture, indica, photo, pixel, transform, process, compress, decompress, codec, manipul, calculat, rate, speed, throughput, bit?rate, transfer, dpi, resolution)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Derwent Abstract Accession No. 2001-020348/03, Class P75; T01, JP 2000-293335 A (SEIKO EPSON CORPORATION) 20 October 2000	1 to 18
X	Derwent Abstract Accession No. 98-081618/08, Class W02, JP 09-314915 A (CANON KABUSHIKI KAISHA) 9 December 1997	1 to 18
A	EP 940975 A (SEIKO EPSON CORPORATION) 8 September 1999	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>		
Date of the actual completion of the international search 6 August 2002		Date of mailing of the international search report 26 SEP 2002
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer PETER T. WEST Telephone No : (02) 6283 2108

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU02/00774

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 899684 A (SEIKO EPSON CORPORATION) 3 March 1999	
A	EP 540338 B (CANON KABUSHIKI KAISHA) 28 January 1998	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU02/00774

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report	Patent Family Member	
JP 2001-293335	NONE	
JP 09-314915	NONE	
EP 940975	JP 11-252366	
EP 899684	JP 11-070706	
EP 540338	DE 69224263	US5872636
END OF ANNEX		